WHAT IS CLAIMED IS:

1. A method for moving teeth, said method comprising:

determining an occlusion from a computer model of a patient's teeth; and

generating a plurality of appliances based on the occlusion, wherein the appliances comprise polymeric shells having cavities and wherein the cavities of successive shells have different geometries shaped to receive and resiliently reposition the teeth from one arrangement to a successive arrangement.

2. The method of claim 1, wherein determining an occlusion comprises using one or more keys.

3. The method of claim 2, wherein one of the keys is based on a molar relationship.

4. The method of claim 3, further comprising occluding a first permanent molar with a second permanent molar.

5. The method of claim 4, wherein the first permanent molar has a disto buccal cusp with a distal surface and the second permanent molar has a mesiobuccal cusp with a mesial surface and wherein the distal surface occludes with the mesial surface.

6. The method of claim 5, wherein the mesiobuccal cusp occludes in a groove between mesial and middle cusps of the first permanent molar.

7. The method of claim 4, wherein the mesial surface closely approaches the distal surface.

8. The method of claim 3, wherein the teeth include canines and premolars and wherein the canines and premolars have a cusp-embrasure relationship buccally and a cusp-fossa relationship lingually.

9. The method of claim 2, wherein one of the keys is based on an angulation of a crown.

10. The method of claim 9, wherein the crown has a distal crown tip, further comprising determining a distal inclination of a gingival portion of the crown.

11. The method of claim 10, wherein the distal inclination is constant.

12. The method of claim 10, wherein the distal inclination is constant within each tooth type.

13. The method of claim 10, wherein the angulation is determined between a facial axis of the clinical crown (FACC) and a line perpendicular to an occlusal plane.

14. The method of claim 13, wherein the angulation is minimized.

15. The method of claim 9, wherein the angulation is positive.

16. The method of claim 9, wherein the angulation is negative.

17. The method of claim 2, wherein one of the keys is based on a crown inclination.

18. The method of claim 17, wherein the crown inclination represents an angle formed by a line perpendicular to an occlusal plane and the FACC.

19. The method of claim 17, wherein the crown inclination is negative when measured from an upper canine through an upper second premolar.

20. The method of claim 17, wherein the crown inclination is progressively more negative when measured from a lower canine through a lower second molar.

21. The method of claim 17, wherein the crown inclination between a line parallel and tangent to a facial axis of the clinical crown (FACC) at its midpoint and a line perpendicular to an occlusal plane.

22. The method of claim 2, wherein one of the keys is based on tooth rotation.

23. The method of claim 22, wherein the teeth are free of undesirable rotations.

24. The method of claim 2, wherein one of the keys is based on a tooth contact point.

25. The method of claim 24, wherein the contact point is tight.C

26. The method of claim 24, wherein no spaces exist between contact points.

27. The method of claim 2, wherein one of the keys is based on an occlusal plane.

28. The method of claim 27, wherein the plane ranges between flat to curves of Spee.

29. The method of claim 28, wherein the plane is flat.

30. The method of claim 28, wherein the plane follows a curve of Spee.

31. The method of claim 30, wherein the curve of Spee is deep.

32. The method of claim 30, wherein the curve of Spee is slight.

33. The method of claim 30, wherein the curve of Spee is reversed.

34. The method of claim 2, wherein one of the keys is selected from a group consisting of a molar relationship, a crown angulation, a crown inclination, teeth rotations, teeth contact points, and an occlusal plane.

35. The method of claim 2, further comprising optimizing a final placement of the teeth.

36. The method of claim 35, further comprising:
identifying one or more features associated with the teeth; and
generating a model of the teeth based on the identified features.

37. The method of claim 36, wherein at least one of the feature is identified automatically.

38. The method of claim 37, wherein at least one of the feature is identified by a user.

39. The method of claim 2, wherein the computer representation is an ideal model set of teeth.

40. The method of claim 36, wherein the ideal model set of teeth is derived from a cast of the patient's teeth.

41. The method of claim 36, wherein the ideal model set of teeth is derived from a patient with a good occlusion.

42. The method of claim 2, further comprising generating progress reports associated with the determined occlusion.

43. The method of claim 42, further comprising browsing the generated reports over a network.

44. The method of claim 43, wherein the network is a wide area network.

45. The method of claim 44, wherein the wide area network is the Internet.

46. The method of claim 43, wherein the network is a local area network.

47. The method of claim 42, wherein the progress report is viewed by a patient.

48. The method of claim 42, wherein the progress report is viewed by a clinician.

49. The method of claim 2, wherein the user manipulates the computer representation of the masticatory system.

50. The method of claim 49, wherein the user is a patient.

51. The method of claim 50, wherein the user is a clinician.

52. The method of claim 2, further comprising:

generating a model the teeth; and

adjusting teeth position in the model by following a prescription.

53. The method of claim 2, further comprising:

generating a model the teeth, the model having a visual appearance; and

adjusting teeth position in the model until the visual appearance of the model is satisfactory.

54. The method of claims 52, wherein the model is based on an abstract model of idealized teeth placement.

55. The method of claim 54, wherein the abstract model is specified by one or more arch forms.

56. The method of claim 55, wherein the ideal model may be specified using one or more features associated with the teeth.

57. The method of claim 52, wherein the teeth position is customized to the patient's teeth.

58. The method of claims 53, wherein the model is based on an abstract model of idealized teeth placement.